

A Reproducible Method for Assessing the Effects of Blue Light Using In Vitro Human Skin Tissue

Genemarkers' paper "Reproducible method for assessing the effects of blue light using in vitro human skin tissues," has been published

KALAMAZOO, MICHIGAN, UNITED STATES, January 20, 2023 /EINPresswire.com/ -- [Genemarkers LLC](#) is pleased to announce the publication of the paper, "[Reproducible method for assessing the effects of blue light using in vitro](#) human skin tissues," in the International Journal of Cosmetic Science.

High-intensity visible light (HEV), also known as blue light, accounts for approximately one-third of visible light. Electronic devices and artificial lighting are top emitters of blue light. Previous research has established that exposure to blue light for periods as short as one hour can have detrimental effects on the skin. Blue light exposure can increase reactive oxygen species (ROS), apoptosis, and necrosis. Although the damaging effects of blue light are well-established, the ability to study the impact of blue light on human skin has been limited by a lack of suitable in vitro testing methods. Genemarkers' research bridges this gap.

Using a full-thickness, 3D, in vitro skin tissue model, Genemarkers used varying exposures of blue light to determine the biological effects on human skin. This work demonstrated that daily exposure to blue light produced dose-and-time-dependent changes in the genes associated with skin damage.

The study found that exposure to blue light increased the expression of genes that regulate inflammation and oxidative stress and decreased the expression of genes maintaining the skin barrier and tissue integrity. Exposure significantly increased biomarkers associated with aging and tissue damage. Treatment with ascorbic acid inhibited the effects of blue light, suggesting



that topical antioxidants can protect the skin from the deleterious effects of blue light.

As a result of this work, Genemarkers has launched a new blue light testing service that includes a gene expression panel containing 52 genes specifically impacted by blue light; the genes regulate biological pathways such as oxidative stress, inflammation, and skin aging. This service enables Genemarkers' clients to assess how their products protect against and repair damage caused by the skin's exposure to blue light.

Alisha Morrison

Genemarkers, LLC

[email us here](#)

Visit us on social media:

[LinkedIn](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/612416246>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2023 Newsmatics Inc. All Right Reserved.